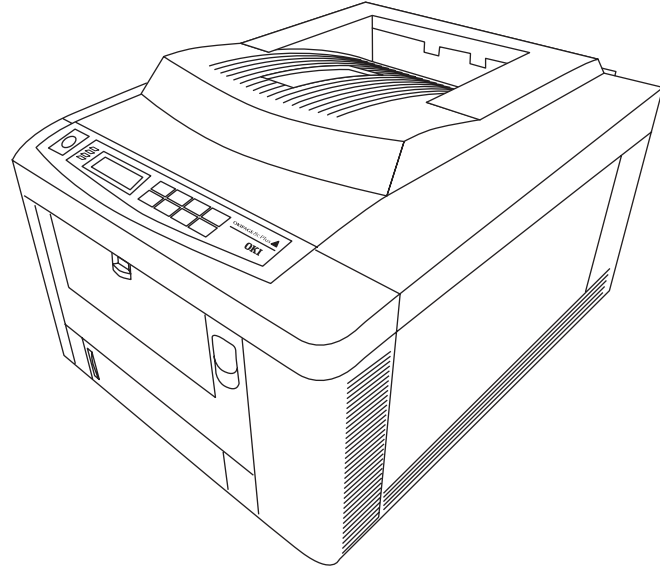


OKIPAGE 8c Plus



User's Guide

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Safety

Your Oki printer has been carefully designed to give you years of safe, reliable performance. As with all electrical equipment, however, there are a few basic precautions you should take to avoid hurting yourself or damaging the printer:

- Read the Setup Guide carefully. Be sure to save it for future reference.
- Read and follow all warning and instruction labels on the printer itself.
- Unplug the printer before you clean it. Use only a damp cloth; do not use liquid or aerosol cleaners.
- Place your printer on a firm, solid surface. If you put it on something unsteady, it may fall and be damaged; if you place it on a soft surface, such as a rug, sofa, or bed, the vents may become blocked, causing the printer to overheat.
- To protect your printer from overheating, make sure all openings on the printer are not blocked. Do not put the printer on or near a heat source, such as a radiator or heat register. Keep it out of direct sunlight. Allow enough room around the printer for adequate ventilation and easy access to the paper trays.
- Do not use your printer near water, or spill liquid of any kind into it.
- Be certain that your power source matches the rating listed on the back of the printer. If you are not sure, check with your dealer or with your local power company.
- Your printer has an earthed, 3-pin plug as a safety feature, and it will only fit into an earthed outlet. If you can not plug it in, chances are you have an older, non-earthed outlet; contact an electrician to have the outlet replaced. Do not use an adapter to defeat the earthing.
- To avoid damaging the power cable, do not put anything on it or place it where it will be walked on. If the cable becomes damaged or frayed, replace it immediately.
- If you are using an extension cable or power strip with the printer, make sure that the total of the amperes required by all the equipment on the extension is less than the extension's rating. The total ratings of all equipment plugged into the outlet should not exceed 13 amperes.
- The power outlet into which you plug your printer must remain accessible at all times.
- Lifting the top cover exposes hot surfaces. These are clearly labelled. Do NOT touch them.
- Do not poke anything into the ventilation slots on the printer; you could get a shock or cause a fire.

- Aside from the routine maintenance described in this handbook, do not try to service the printer yourself; opening the cover may expose you to shocks or other hazards. Always contact your local dealer.
- Do not make any adjustments other than those outlined in the handbook you may cause damage requiring extensive repair work.

If anything happens that indicates that your printer is not working properly or has been damaged, unplug it immediately and contact your dealer.

These are some of the things to look for:

- The power cable or plug is frayed or damaged.
- Liquid has been spilled into the printer, or it has been exposed to water.
- The printer has been dropped, or the cabinet is damaged.
- The printer does not function normally when you are following the operating instructions.

This product complies with the requirements of the Council Directives 89/336/EEC and 73/23/EEC on the approximation of the laws of the member states relating to electromagnetic compatibility and low voltage.

Symbols in this Book



This symbol marks a 'note'. Notes are hints or tips which offer additional information to help you.



This symbol marks a 'caution'. Cautions are special notices which you should read and follow carefully to avoid possible damage to your equipment.



This symbol marks a 'warning'. Warnings are special notices which you should read and follow carefully to avoid potential danger to yourself or others.

Energy Star



As an ENERGY STAR Partner, Oki has determined that this product meets the Energy Star guidelines for energy efficiency.

Operator Panel Menus

The keys on the operator panel and the LCD display provide a means of controlling the operation of your printer. There are two main menus: Menu 1 and Menu 2.

Each menu is organised into three levels: *Categories*, *Items* and *Settings*.

Categories divide the menu items up into related groups, or topics. These appear on the top line of the display.

When the required category is selected, the top line changes to show the current menu item.

When the item is displayed in the top line, the current setting for that item is displayed in the bottom line. Each menu item has two or more settings associated with it.

The currently active setting also displays the asterisk (*) character.



Note: Tray 2 only appears in **Menu 1/Menu 2** if the optional Tray 2 is fitted to the printer.

Viewing and Using Menu 1 & Menu 2

To display a menu, press the **ON LINE** key to take the printer **OFF LINE**.

To enter Menu 1, press and release the **MENU 1 / Menu 2** key. The first category in Menu 1 will be displayed on the top line.

To enter Menu 2, press and hold for more than 2 seconds the **MENU 1 / Menu 2** key. The first category in Menu 2 will be displayed on the top line.

To advance through the available categories in either menu, press and release the **MENU 1 / Menu 2** key. When the last category is displayed, pressing the **MENU 1 / Menu 2** key again returns to the first category.

To select a category and view the items in that category, press and release the **ENTER** key when the required category is displayed.

To advance through the menu items, press the **MENU 1 / Menu 2** key repeatedly until the required item is displayed. When the last item is displayed, pressing the **MENU 1 / Menu 2** key again advances to the next category.

To cycle through the available settings when a menu item is displayed, press the ← or → keys to move through the available settings in either direction.

To choose the currently displayed setting and make it active, press the **ENTER** key. An asterisk (*) character will appear next to the chosen setting.

To exit the menu, press the **ON LINE** key to return the printer to the ON LINE (ready) condition.

Viewing and Using the User Maintenance Menu

This is a special menu used for functions, such as disabling or enabling the operator panel controls.

The user maintenance menu is organised in two levels: Items and Settings.

To enter this menu you must first switch the printer off.

Whenever you switch the printer off, it is a good idea to wait for at least ten seconds before switching it on again, to ensure that memory contents are properly cleared and internal power supplies are allowed to settle.

Hold down the **MENU 1 / Menu 2** key and switch the printer on.

Continue holding down the **MENU 1 / Menu 2** key until the menu name (USER MNT) appears.

Press and release the **MENU 1 / Menu 2** key to cycle through the available items. When the item you require is displayed, press the **ENTER** key to select it.

Some user maintenance menu items can be exited by pressing the **ON LINE** key to return the printer to the ON LINE (ready) condition. However, to exit from some other items you will need to switch the printer off and back on again. (Remember to wait at least ten seconds before restoring power.)

The tables on the next several pages detail all menu items and the available settings, and explain how these settings control the operation of your printer.

Menu 1

| CATEGORY | ITEM | SETTING | EXPLANATION |
|-------------|------------------|---|--|
| PERSONALITY | EMULATION | AUTO* PCL5c ADOBE POSTSCRIPT | Selects emulation. Auto is standard. PCL5e or Adobe PostScript can be selected manually. |
| TRAY SELECT | PAPER FEED | TRAY1* TRAY2 FRONT | Selects the standard tray to feed paper from. May be overridden by software application. NOTE Tray 2 only appears in Menu 1 if the optional Tray 2 is fitted to the printer. |
| | AUTO TRAY SWITCH | OFF* ON | If ON, when a paper tray runs empty and another tray is loaded with the same stationery, the printer will automatically select the other tray and continue printing. |
| EDIT SIZE | EDIT SIZE | CASSETTE SIZE* LETTER EXECUTIVE LEGAL14 LEGAL13 A4 SIZE A5 SIZE A6 SIZE B5 SIZE | Selects the correct 'edit size' for the stationery in the main trays. This is the printable area inside the physical page size. |
| PAPER SIZE | FRONT | LETTER EXECUTIVE LEGAL14 LEGAL13 A4 SIZE* A5 SIZE A6 SIZE B5 SIZE | Selects the physical paper size. |

| CATEGORY | ITEM | SETTING | EXPLANATION |
|---|------------------|---|---|
| MEDIA TYPE | TRAY1 | LIGHT (59-66 g/m ²) MEDIUM LIGHT (67-73 g/m ²) MEDIUM* (74-88 g/m ²) MEDIUM HEAVY (89-104 g/m ²) HEAVY (105-122 g/m ²) | Selects the appropriate print media type (e.g. lightweight paper, normal paper, cardstock, etc.) |
| | TRAY2 | LIGHT (59-66 g/m ²) MEDIUM LIGHT (67-73 g/m ²) MEDIUM* (74-88 g/m ²) MEDIUM HEAVY (89-104 g/m ²) HEAVY (105-122 g/m ²) | Selects the appropriate print media type (e.g. lightweight paper, normal paper, cardstock, etc.) NOTE Tray 2 only appears in Menu 1 if the optional Tray 2 is fitted to the printer. |
| | FRONT | TRANSPARENCY LIGHT (59-66 g/m ²) MEDIUM LIGHT (67-73 g/m ²) MEDIUM* (74-88 g/m ²) MEDIUM HEAVY (89-104 g/m ²) HEAVY (105-122 g/m ²) ULTRA HEAVY (123-200 g/m ²) | Be sure to select TRANSPARENCY when printing on transparent media. The printer will then process them more slowly. For ULTRA HEAVY media, open and use the rear exit path so that the paper path is as straight as possible. |
| PAPER SIZE CHECK | PAPER SIZE CHECK | ENABLE* DISABLE | If this option is enabled, print media will be checked for the correct size, and a message will appear if the wrong size is loaded. |
| COPIES | COPIES | 1* - 999 | Selects the number of copies to be printed. |
| EURO SIGN | EURO SIGN | ENABLE DISABLE* | Used in certain non-Windows applications to enable printing of the European currency symbol. |
| FONTS & SYMBOLS (PCL emulation only) | FONT SOURCE | RESIDENT DOWNLOADED FLASH | Selects the appropriate source for internal printer fonts. If you have not added optional extra fonts in additional memory or downloaded soft fonts, only the RESIDENT choice will appear. |

| CATEGORY | ITEM | SETTING | EXPLANATION |
|---|-----------------|-------------------------|---|
| FONTS & SYMBOLS (Cont) | FONT No. | 1000* | Selects the appropriate font from the internal font set to use for received text files. These may be identified by printing the font list from the operator panel. |
| | FONT PITCH | 10.00 CPI* | Sets the horizontal character spacing in characters per inch. Adjustable in steps of 0.01 CPI. |
| | SYMBOL SET | Roman-8* | Selects the symbol set to be used for printing. A wide range of character sets in a number of European languages are available from this menu item. A full list appears later under "Symbol Sets and Fonts". |
| PAGE LAYOUT 1 <i>(PCL emulation only)</i> | A4 PRINT WIDTH | 78 COLUMN* 80 COLUMN | Determines the number of characters printed on a line before the printer will force a line break. |
| | WHITE PAGE SKIP | OFF* ON | Selects whether blank pages are included in the output or suppressed (skipped). |
| | CR FUNCTION | CR* CR + LF | Determines whether a received carriage return character also moves the print position down to the next line. Most applications achieve this function by sending a line feed character after the carriage return, but if lines of text appear to overprint, select CR+LF. |
| | LF FUNCTION | LF* LF + CR | Determines whether a received line feed character also moves the print position to the beginning of the next line. Most applications achieve this function by sending a carriage return character before the line feed, but if consecutive lines of text appear to stagger across the page, select CR + LF. |

| CATEGORY | ITEM | SETTING | EXPLANATION |
|--|----------------|------------------------|--|
| TRUE BLACK <i>(PCL emulation only)</i> | TRUE BLACK | OFF* ON | Determines whether black image areas print using a mixture of primary colours (OFF) or only black toner (ON). The OFF setting results in glossy black, the ON setting results in matt black. This setting affects picture images only, not plain text. |
| PAGE LAYOUT 2 <i>(PCL emulation only)</i> | ORIENTATION | PORTRAIT* LANDSCAPE | Selects which way round the page prints. Portrait is tall, landscape is wide. |
| | LINES PER PAGE | 64 LINES* | Selects the standard number of lines per page. This figure is automatically adjusted when orientation is changed, to preserve the line spacing. |
| HOST INTERFACE | PARALLEL | ENABLE* DISABLE | Makes the parallel interface active or inactive. |
| | HSP | ENABLE* DISABLE | Makes the HSP (e.g. network interface card), if installed, active or inactive. |

Menu 2

| CATEGORY | ITEM | SETTING | EXPLANATION |
|------------------|---|-------------------|---|
| COLOR REG ADJUST | COLOR REG ADJUST | EXECUTE | This item enters the colour registration adjustment routine. Executing this item prints a colour registration chart and moves automatically to the first of nine adjustable settings for possible manual correction. This procedure is documented separately. |
| COLOR BALANCE | COLOR BALANCE | | Adjusts the print density of CMYK to achieve optimum colour balance for the paper in use. this feature is documented in detail later in this manual. |
| ENGINE CNT RESET | CYAN DRMCNT RESET MAGENTA DRMCNT RESET YELLOW DRMCNT RESET BLACK DRMCNT RESET FUSER COUNT RESET BELT COUNT RESET OIL ROLLER CNT RESET | | Resets the page count for each consumable unit (image drums, belt, etc.) to zero after installing a new unit. To reset, select appropriate option and press the ENTER key. |
| SETTING | | -1, -2, 0, +1, +2 | Adjusts internal settings to compensate for variations in humidity. In environments of high temperature and humidity if some feint printing occurs, increase setting. In environments of low temperature and humidity if black or white spots appear, decrease setting. |

| CATEGORY | SETTING | SETTING | EXPLANATION |
|------------------|------------------|----------------------------|--|
| AUTO OPERATION | AUTO CONTINUE | OFF* ON | The printer can recover from a memory overflow or print overrun automatically after about 15 seconds if set to ON, otherwise you will need to press the Recover key. |
| | WAIT TIME OUT | OFF* 5-90*-300 SECONDS | Most computer software will send a form feed character at the end of the print job so that the last page is ejected. If it does not, the printer can automatically eject the last page after a period of inactivity. |
| | MANUAL TIME OUT | OFF 30 SEC 60 SEC* | This setting applies to PostScript operation only (when installed). It determines how long the printer will wait for a sheet to be inserted in the manual paper feeder. |
| POWER SAVING | POWER SAVING | 0 SEC 8 MIN* DISABLE | When this function is active, power to the fuser is turned off to conserve energy. A slightly longer delay will occur before the next job prints, to allow the fuser to warm up again. |
| LOW TONER | LOW TONER | ON* OFF | This setting determines whether the printer will remain on-line (ON) or go off-line (OFF) when one of the toner cartridges has only enough toner left for about 100 pages. |
| CLEARABL WRNINGS | CLEARABL WRNINGS | ON* JOB | Many messages which may appear from time to time can be cleared by pressing the Recover key if this function is ON. If it is set to JOB, the host computer may be able to clear such warnings by downloaded commands. This setting is not relevant when using PostScript emulation. |
| | ERROR REPORT | OFF* ON | In PostScript mode this setting determines whether an error report will be printed when an error has occurred. |

| CATEGORY | ITEM | SETTING | EXPLANATION |
|--------------|--|---|--|
| PARALLEL I/F | PARALLEL SPEED | HIGH* MEDIUM | Most modern PCs can download data at very high speed. If you experience data corruption on printed pages, reduce the setting to MEDIUM. |
| | BI-DIRECTION | ENABLE* DISABLE | The printer can send status information back to the computer. You will need a printer data cable compliant with IEEE1284 to use this feature. |
| | I-PRIME | OFF* ON | When ON, this feature enables your computer to reset the printer by toggling the state of the I-PRIME line on the data interface. |
| OKI HSP | Refer Explanation | Refer Explanation | This category appears if a network card has been fitted to the printer. The ITEM and SETTING that appear under Menu 2 will depend on the type of network the printer is connected to. |
| LANGUAGE | LANGUAGE LANDESSPRACHE LANGAGE LINGUAGGIO IDIOMA SPRÅK MENYSPRÅK SPROG TAAL LİSAN LINGUAGEM JĘZYK | ENGLISH* DEUTSCH FRANCAIS ITALIANO CASTELLANO SVENSKA NORSK DANSK NEDERLANDS TÜRKÇE PORTUGUÊS POLSKI | This settings determines which language is used for LCD messages and menu printing. |

User Maintenance Menu

| ITEM | SETTING / ACTION | EXPLANATION |
|----------------|-------------------|--|
| MENU | RESET | Resets all Menu 1 settings to factory defaults. |
| HEX DUMP | — | Prints received data in ASCII HEX format (e.g. “A” is printed as “41”, “B” as “42”, etc.). Used by programmers and systems specialists such as network administrators. When data length exceeds one page, that page will print and eject automatically. When data is less than one page, take the printer OFF LINE and press the Form Feed key to print and eject the page. To exit this mode the printer must be switched off. |
| RECEIVE BUFFER | AUTO*, 8KB-1MB | Sets the size of the data receive buffer. |
| OP MENU | ENABLE DISABLE | Can disable the operator panel controls so that users cannot change menu settings. |
| X ADJUST | -2.00 ~ +2.00 | Adjusts the position printed image on the page horizontally (X) or vertically (Y) in increments of 0.25mm. Any part of the printed image which is moved out of the printable page area will be clipped. Useful for accurate print alignment on pre-printed forms. |
| Y ADJUST | -2.00 ~ +2.00 | |

Adjusting Colour Registration

Each of the four image drums is responsible for producing that part of the printed image corresponding to its particular colour. The three primary colours and black are mixed in various proportions to obtain other colours.

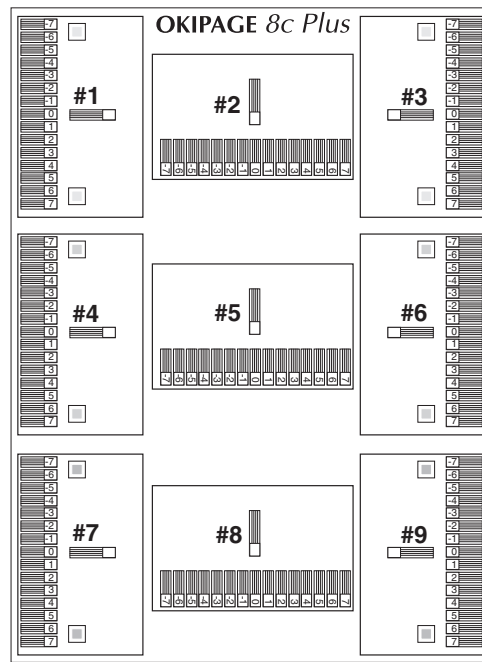
Of course, it is essential that each image drum cartridge produces its part of the printed image at exactly the right place on the page relative to each of the others. If one cartridge, for example yellow, is slightly misaligned you will notice slight traces of yellow at the edges of other colours where yellow should not appear. This very precise alignment is known as *colour registration*.

If you notice any symptoms like that described above, you can easily correct colour registration using the operator panel controls on your printer. These adjustments align the three colour cartridges precisely to the black cartridge. Your printer has a built-in test pattern to help you.

1. Press the **ON LINE** key if necessary to take the printer OFF LINE.
2. Press and hold the **MENU 1 / Menu 2** key until the message COLOR REG ADJUST appears in the display panel, then release the button.

3. Press the **ENTER** key. The display will show INITIALIZING for a few seconds and then PRINT PATTERN.

After a short delay the registration test pattern will emerge.



Although this page at first appears complicated, upon examination you will see that it actually has 9 areas which are virtually identical. There are three adjustments for each colour, and these adjustments are simply repeated. The whole process should take no more than about 10 minutes.

Each area shows boxed sections, most of which have some colour inside them. Ideally, the centre boxes — those corresponding to the numbers +2 to -2 should be almost free of colour, like the box shown by itself, which contains no colour at all.

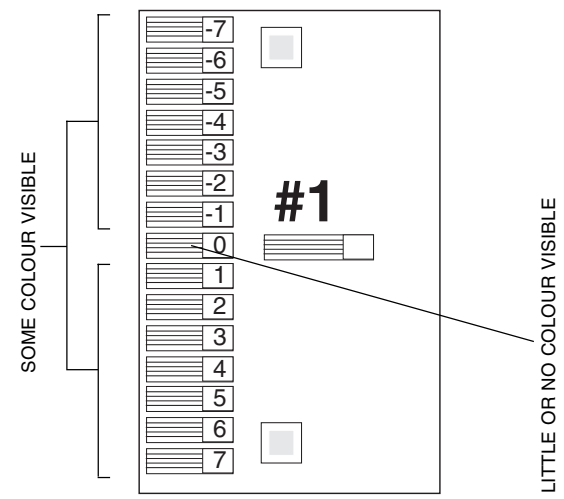
Once the test pattern has appeared the printer displays ADJUST #1 ready for adjustment. This relates to area 1 on the test pattern.

4. Examine area #1 on the test pattern closely and identify which of the numbered boxes contains no colour (or which contains the least colour). That number is the setting which should be entered on the printer menu. Use the ← or → keys to increment or decrement the setting if a number other than 0 is required. When the display shows the number you want, press the **ENTER** key to enter it. An asterisk (*) will appear in the display.
5. Press the **MENU 1 / Menu 2** key to move forward to ADJUST #2.

The rest of the 9 settings are similar. Although this may at first seem a little complicated, by the time you have completed 2 or 3 settings it will become fairly a simple and straight forward procedure to adjust colour registration.



You may find colour registration adjustment quicker and easier if you examine all nine areas first, making a note in each area of the test pattern of any numerical adjustment needed (simply write nothing in the areas which do not need adjustment). You can then speed through the nine adjustments, entering the values you have noted.



When you have completed the 9th setting and pressed the **MENU 1 / Menu 2** key to move on, the display will read PRINT EXECUTE.

6. Press the **ENTER** key to print a new test pattern and compare the results.

You may need to repeat the 9 adjustments 2 or 3 times to achieve accurate alignment, since they are interdependent. However, the whole process can be completed in about 10 minutes, and should not often need readjustment.

Adjusting Colour Balance

Your printer uses three primary colours plus black mixed in appropriate proportions to print images in a wide range of colours. The relative density of each primary colour determines the actual colour printed. This property is known as *colour balance*.

Although the printer and its consumables are all manufactured to very high standards of precision, very small variances in manufacture, as well as variations in paper composition and printing environment, can cause minor shifts in colour balance to occur from time to time.

You can easily make fine adjustments to colour balance using the operator panel controls on your printer. Your printer has a built-in test pattern to help you.

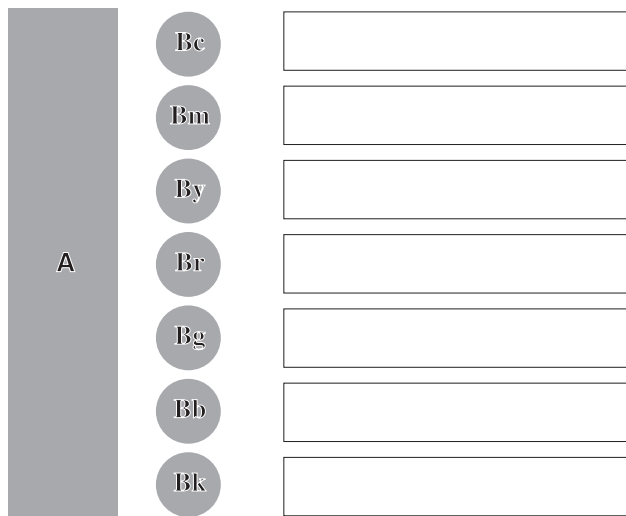


Since colour balance is affected by the particular paper you will print on, you should load that paper type before making these adjustments.

1. Press the **ON LINE** key if necessary to take the printer OFF LINE.
2. Press and hold the **MENU 1 / Menu 2** key until the message COLOR REG ADJUST appears in the display panel, then release the button.

3. Momentarily press and release the **MENU 1 / Menu 2** key so that the message PRINT PATTERN COLOR BALANCE is displayed.
4. Press the **ENTER** key. After a short delay the colour balance test pattern will emerge, and the printer will enter its adjustment mode.
5. Examine each of the coloured circles carefully to determine which one is most closely matched in colour to the large area A, then make adjustments as described in the next step.
6. Each primary colour and its current setting is displayed in turn. Use the ← or → keys to increase or decrease the setting if required, then press the **ENTER** key to enter it. An asterisk (*) will appear in the display.

The test pattern contains a large rectangular area marked A and 7 coloured circles, marked Bc, Bm, By, Br, Bg, Bb and Bk.



- Bc Reduce cyan setting by 1. If cyan is already set to -2, then increase magenta and yellow settings by 1.
- Bm Reduce magenta setting by 1. If magenta is already set to -2, then increase cyan and yellow settings by 1.
- By Reduce yellow setting by 1. If yellow is already set to -2, then increase cyan and magenta settings by 1.
- Br Increase cyan setting by 1. If cyan is already set to +2, then reduce magenta and yellow settings by 1.
- Bg Increase magenta setting by 1. If magenta is already set to +2, then reduce cyan and yellow settings by 1.
- Bb Increase yellow setting by 1. If yellow is already set to +2, then reduce cyan and magenta settings by 1.
- Bk No adjustment is necessary.

7. Press the **MENU 1 / Menu 2** key to move forward to the next primary colour.

When you have completed the last setting and pressed the **MENU 1 / Menu 2** key to move on, the display will read PRINT EXECUTE.

8. Press the **ENTER** key to print a new test pattern and compare the results.

You may need to repeat these adjustments 2 or 3 times to achieve optimum colour balance.

9. After the new test pattern has been printed the display will show EXIT. Press the **ENTER** key to exit from this adjustment, or the **MENU 1 / Menu 2** key to repeat the procedure.

Fonts

Your printer supports both bitmapped and scalable fonts in a wide range of character sets for use in a number of European languages.

You can see a list and printed examples of all the fonts resident in the printer by printing a *font list*.

To print the font list:

1. Press the **ON LINE** key to take the printer OFF line.
2. Press and hold the **Print Fonts** key for more than 2 seconds, then release. Press the **←** or **→** key to select PCL5c or Adobe Postscript fonts and then press the **ENTER** key. After a short delay a list of all the selected fonts, together with examples of what they look like, will emerge.

Bit Mapped Fonts

These are character shapes stored as a collection of dots (bits). They are stored in a fixed size. If you print enlarged versions you will see jagged edges around the characters, due to the enlarged dots.

Examples of resident bit mapped fonts are LinePrinter, OCR-A, OCR-B and UPSZIP (bar codes).

Scalable Fonts

These are stored as outline curves represented by mathematical formulae, and may be scaled larger without loss of print resolution.

When scalable fonts are used in a document a temporary bit map of each character is created in a special part of the printer's memory called the font cache. This bit map is produced at the full operating resolution of the printer, either 300 or 600dpi, depending on which is currently selected, so no jagged edges are apparent.

Examples of resident scalable fonts are Courier, CG Times and Univers. There are many other resident fonts stored in your printer, as you will see when you print the font list.

Using Fonts in Windows Applications

If you run Windows on your computer you will be familiar with the selection of different fonts within your documents.

Most Windows applications use TrueType fonts, a scalable font technology pioneered by Apple Computer Corp. Most TrueType fonts in Windows documents will download to the printer automatically as they are required. However, if you choose the printer's resident fonts, your documents will generally print faster and use less printer memory.

HP Emulation (PCL) Symbol Sets & Fonts

The following tables indicate which fonts are available for each symbol set in HP LJ5 Emulation mode.

| # | Typeface | | | CG Times | Courier | Letter | Arial / | Symbols | Wingdings | LinePrinter | USPS ZIP | OCR-A,B | Other |
|----|----------------------------|----------------|-----|-----------|-----------|-----------|-----------|-----------|-----------|-------------|----------|---------|-----------|
| | Symbol set | LCD Indication | ID | / Univers | | Gothic | TimesNew | | | | | | Fonts |
| | | | | MicroType | MicroType | MicroType | MicroType | MicroType | TrueType | Bitmap | Bitmap | Bitmap | MicroType |
| 1 | Roma21n-8 | Roman-8 | 8U | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 2 | ISO-8859/1 Latin1(ECMA-94) | ISO L1 | 0N | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 3 | PC-8 | PC-8 | 10U | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 4 | PC-8 Danish/Norwegian | PC-8 Dan/Nor | 11U | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 5 | PC-850 | PC-850 | 12U | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 6 | Legal | Legal | 1U | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 7 | ISO-2 IRV | ISO-2 IRV | 2U | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 8 | ISO-4 United Kingdom | ISO-4 UK | 1E | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 9 | ISO-6 US ASCII | ISO-6 ASC | 0U | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 10 | ISO-10 Swedish/Finnish | ISO-10 S/F | 3S | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 11 | ISO-11 Swedish:names | ISO-11 Swe | 0S | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 12 | ISO-14 JIS ASCII | ISO-14 JASC | 0K | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 13 | ISO-15 Italian | ISO-15 Ita | 0I | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 14 | ISO-16 Portuguese | ISO-16 Por | 4S | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 15 | ISO-17 Spanish | ISO-17 Spa | 2S | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 16 | ISO-21 German | ISO-21 Ger | 1G | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 17 | ISO-25 French | ISO-25 Fre | 0F | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 18 | ISO-57 Chinese | ISO-57 Chi | 2K | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 19 | ISO-60 Norwegian v1 | ISO-60 Nor | 0D | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 20 | ISO-61 Norwegian v2 | ISO-61 Nor | 1D | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 21 | ISO-69 French | ISO-69 Fre | 1F | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 22 | ISO-84 Portuguese | ISO-84 Por | 5S | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |

HP Emulation (PCL) Symbol Sets & Fonts *(continued)*

| Typeface | | | | CG Times | Courier | Letter | Arial / | Symbols | Wingdings | LinePrinter | USPS ZIP | OCR-A,B | Other |
|----------|-----------------------|----------------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|----------|---------|-----------|
| # | Symbol set | LCD Indication | ID | / Unifers | | Gothic | TimesNew | | | | | | Fonts |
| | | | | MicroType | MicroType | MicroType | MicroType | MicroType | TrueType | Bitmap | Bitmap | Bitmap | MicroType |
| 23 | ISO-85 Spanish | ISO-85 Spa | 6S | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 24 | HP German | German | 0G | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 25 | HP Spanish | Spanish | 1S | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 26 | ISO Dutch | ISO Dutch | 90D | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 27 | Roman Extension | Roman Ext | 0E | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 28 | ISO Swedish1 | ISO Swedish 1 | 91S | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 29 | ISO Swedish2 | ISO Swedish 2 | 92S | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 30 | ISO Swedish3 | ISO Swedish 3 | 93S | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 31 | IBM Code Page 437 | IBM-437 | 2038Z | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 32 | IBM Code Page 850 | IBM-850 | 2039Z | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 33 | IBM Code Page 860 | IBM-860 | 2037Z | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 34 | IBM Code Page 863 | IBM-863 | 2036Z | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 35 | IBM Code Page 865 | IBM-865 | 2035Z | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 36 | PC Set1 | PC Set1 | 8Q | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 37 | PC Extension US | PC Ext US | 9Q | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 38 | PC Extension D/N | PC Ext D/N | 2033Z | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 39 | PC Set2 US | PC Set2 US | 2034Z | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 40 | PC Set2 D/N | PC Set2 D/N | 2032Z | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 41 | Ventura Math | VN Math | 6M | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 42 | Ventura International | VN Int'l | 13J | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 43 | Ventura US | VN US | 14J | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 44 | PS Math | PS Math | 5M | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 45 | PS Text | PS Text | 10J | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |

HP Emulation (PCL) Symbol Sets & Fonts *(continued)*

| Typeface | | | | CG Times | Courier | Letter | Arial / | Symbols | Wingdings | LinePrinter | USPS ZIP | OCR-A,B | Other |
|----------|-------------------------------|----------------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|----------|---------|-----------|
| # | Symbol set | LCD Indication | ID | / Univers | | Gothic | TimesNew | | | | | | Fonts |
| | | | | MicroType | MicroType | MicroType | MicroType | MicroType | TrueType | Bitmap | Bitmap | Bitmap | MicroType |
| 46 | Math-8 | Math-8 | 8M | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 47 | Pi Font | Pi Font | 15U | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 48 | Microsoft Publishing | MS Publish | 6J | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 49 | Windows 3.0 Latin 1 | Win 3.0 | 9U | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 50 | Desk Top | Desktop | 7J | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 51 | Windows 3.1 Latin 1 (ANSI) | Win 3.1 L1 | 19U | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 52 | MC Text | MC Text | 12J | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 53 | PC-852 (East Euro. CP 852) | PC-852 | 17U | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 54 | Windows 3.1 Latin 5 | Win 3.1 L5 | 5T | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 55 | Windows 3.1 Latin 2 (E.Euro.) | Win 3.1 L2 | 9E | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 56 | CWI Hungarian | CWI Hung | 2044Z | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 57 | PC-857 (Turkish CP 857) | PC-857 TK | 2040Z | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 58 | ISO8859/2 (Latin 2 (ECMA-94)) | ISO L2 | 2N | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 59 | ISO8859/9 Latin 5 (ECMA-128) | ISO L5 | 5N | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 60 | Turkish PC-8 (PC Turkish) | PC-8 TK | 9T | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |
| 61 | Kamenicky <MJK> | Kamenicky | 2022Z | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ |
| 62 | Hebrew NC (862) | Hebrew NC | 2020Z | ✓ | ✓ | | | | | | | | |
| 63 | Hebrew OC | Hebrew OC | 2021Z | ✓ | ✓ | | | | | | | | |
| 64 | Polska Mazovia | Plska Mazvia | 2023Z | ✓ | ✓ | | | | | | | | |
| 65 | ISO8859/10 Latin 6 | ISO L6 | 2027Z | ✓ | ✓ | | | | | | | | |
| 66 | Hebrew Windows 3.1 | Win 3.1 Heb | 2019Z | ✓ | ✓ | | | | | | | | |
| 67 | HP ZIP Code | HP ZIP | 15Y | | | | | | | | | | |
| 68 | USPS ZIP Code | USPSZIP | 97Y | | | | | | | | ✓ | | |

HP Emulation (PCL) Symbol Sets & Fonts *(continued)*

| # | Typeface | | | CG Times | Courier | Letter | Arial / | Symbols | Wingdings | LinePrinter | USPS ZIP | OCR-A,B | Other |
|----|----------------------------|----------------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|----------|---------|-----------|
| | Symbol set | LCD Indication | ID | / Unifers | | Gothic | TimesNew | | | | | | Fonts |
| | | | | MicroType | MicroType | MicroType | MicroType | MicroType | TrueType | Bitmap | Bitmap | Bitmap | MicroType |
| 69 | USPS FIM Bars | USPSFIM | 98Y | | | | | | | | | | |
| 70 | USPS Stamp Here | USPSSTP | 99Y | | | | | | | | | | |
| 71 | Cyrillic Windows 3.1 | Win 3.1 Cyr | 9R | ✓ | | | | | | | | | |
| 72 | PC-866 (Cyrillic 2 CP 866) | PC-866 | 3R | ✓ | | | | | | | | | |
| 73 | Greek Windows 3.1 | Win 3.1 Grk | 2042Z | ✓ | | | | | | | | | |
| 74 | PC-869 (Greek CP 869) | PC-869 | 2041Z | ✓ | | | | | | | | | |
| 75 | PC-855 (Cyrillic CP 855) | PC-855 | 2031Z | ✓ | | | | | | | | | |
| 76 | Wingdings | Wingdings | 579L | | | | | | ✓ | | | | |
| 77 | Symbol | Symbol | 19M | | | | | ✓ | | | | | |
| 78 | Greek 437 | Greek-437 | 2022Z | ✓ | | | | | | | | | |
| 79 | Greek 437 Cyprus | Greek-437 Cy | 2025Z | ✓ | | | | | | | | | |
| 80 | Greek 928 | Greek 928 | 2026Z | ✓ | | | | | | | | | |
| 81 | Serbo Croatic II | Serbo Croat2 | 2018Z | ✓ | | | | | | | | | |
| 82 | Ukrainian | Ukrainian | 2017Z | ✓ | | | | | | | | | |
| 83 | Bulgarian | Bulgarian | 2016Z | ✓ | | | | | | | | | |
| 84 | OCR-A | OCR-A | 00 | | | | | | | | | ✓ | |
| 85 | OCR-B | OCR-B | 10 | | | | | | | | | ✓ | |
| 86 | Ventura ITC Zapf Dingbats | none | 9L | | | | | | | | | | |
| 87 | PS ITC Zapf Dingbats | none | 10L | | | | | | | | | | |
| 88 | ITC Zapf Dingbats 100 | none | 11L | | | | | | | | | | |
| 89 | ITC Zapf Dingbats 200 | none | 12L | | | | | | | | | | |
| 90 | ITC Zapf Dingbats 300 | none | 13L | | | | | | | | | | |

Paper & Other Print Media

Your printer is capable of high quality output on various media types. For most general purpose office applications normal 80g/m² copier paper is adequate. However, for better print quality a high grade paper recommended for laser printing will give better image definition and contrast, as well as brighter, more vibrant colours.

Heavily textured or embossed paper stock will generally give poor results, because it is difficult to effectively transfer a toner image to such materials and then fuse it properly.

Transparencies may be used for overhead projectors, but these must be of the type intended for use in laser printers or copiers. They must be able to withstand the high temperatures generated by the fuser, and should not be of the type with removable backing paper or edging strip.



On no account use transparencies intended only for marking directly with marker pens. These will melt and cause extensive internal damage to your printer.

Dealing With Paper Jams

Your printer should give years of reliable service, handling a range of print media (paper, transparencies, etc.) with few problems. However, paper jams may occur from time to time, due to excess humidity, damaged paper (for example, torn or bent corners), or minor malfunction.

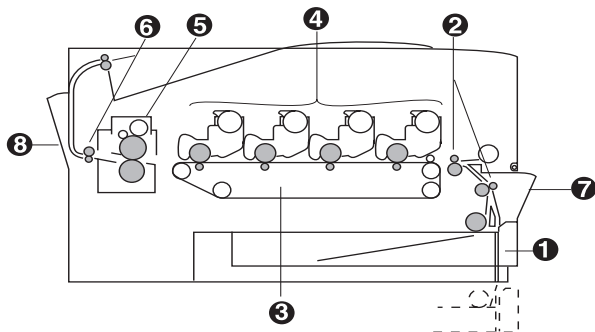
Paper jams will be indicated on the operator panel display, the printer will stop, and the ATTENTION light will illuminate.

A paper jam does not always mean that paper is physically jammed. It simply means that paper has been detected where it should not be at that time, or no paper has been detected where there should be paper at that time.

| | |
|-----------------|---|
| Paper Input Jam | Paper has jammed between the paper tray and the first image drum. |
| Paper Feed Jam | Paper has jammed after the first image drum and before the fuser. |
| Paper Exit Jam | Paper has jammed in the fuser or between the fuser and the point of exit. |

Standard Paper Path

The illustration (looking into the left-hand side of the printer) here shows the paper path through the printer.



Paper is normally fed from the paper tray (1), through the paper entry pinch rollers (2), and onto the transfer belt (3). It is held against the transfer belt by an electrostatic charge.

As the belt rotates (anti-clockwise in this view), the paper passes under each of the four image drums (4), where the toner image is transferred to the paper and held there lightly by electrostatic charge.

The paper then moves on to the fuser assembly (5), where the image is made permanent by a mixture of heat and physical pressure.

On leaving the fuser, the paper passes via two pairs of exit pinch rollers (6) and on to the paper stacker on top of the printer or the rear stacker if it is open.

Gaining Access to the Paper Path

Access to the paper entry area is via the front feeder unit (7). Access to the paper exit (post fuser) area is via the rear stacker (8). Access to the paper feed area is via the top cover.

Front Feeder and Rear Exit Paper Path

When feeding heavy print media it is advisable to use the front feeder and rear stacker to keep the paper path as straight as possible.

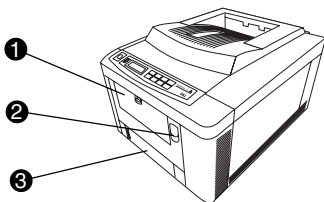
Paper enters from the front feeder into the front pinch rollers (2), and travels on to the transfer belt in an almost straight line.

On leaving the fuser assembly the paper emerges out through the open rear exit face upwards.


Clearing a Paper Input Jam

A paper input jam indication means paper has jammed between the tray and the first image drum cartridge.

1. Open the front feeder (1) by lifting the latch (2) and pulling the cover out and downwards.



2. Remove any paper visible in this area.

 If paper has advanced up to the first image drum and resists pulling, clear it as for a paper feed jam, described in the next procedure.

3. Pull out the paper tray (3) and remove any partially feed sheets.
4. Check that the paper in the tray is stacked neatly, with no sheets bent or stuck together.
5. Push the tray in gently. A full tray is heavy and can damage the printer if slammed shut.

Clearing a Paper Feed Jam

If paper jams between the first image drum and the fuser it will be necessary to open the top cover. There is no electrical shock hazard, since this area is protected by interlocks, so power may be left on during this operation.

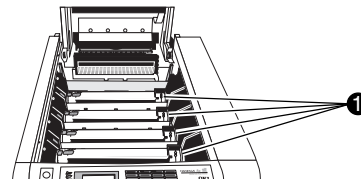



When accessing the central area take care not to touch the hot surfaces around the fuser. These are clearly marked with yellow warning labels, and are very hot.



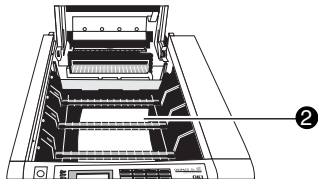
When removing image drums, keep them away from strong light, especially direct sunlight. If in doubt, place them in their black lightproof bags (supplied with the printer and with new drums).


1. Press the OPEN button and lift the top cover to its fully upright position.
2. Lift out each of the four image drum cartridges (1) complete with their respective toner cartridges still in place.



 Put the drum cartridges where they will not be scratched and not exposed to strong light.

3. Inspect the paper path for sheets of paper. Carefully remove any sheets (2) you find.



 Paper jammed under the first image drum should be pulled forwards through the paper path if possible, not backwards, to avoid spillage of unfused toner into the paper input area.


Be especially careful not to scratch the transfer belt. Avoid using sharp instruments.

4. Lower each image drum cartridge back into position via its two locating slots at each side of the printer, being careful to match the coloured label on each cartridge with its corresponding coloured label in the printer.
5. Close the top cover and press down firmly at both sides to ensure that it is locked down.

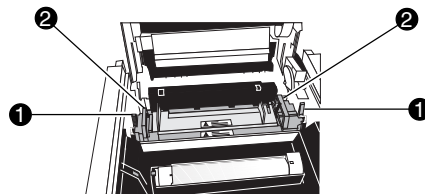
Clearing a Paper Exit Jam

An indicated paper exit jam means paper has jammed in the fuser or between the fuser and the point of exit from the printer.

1. Press the OPEN button and raise the top cover to its fully upright position.

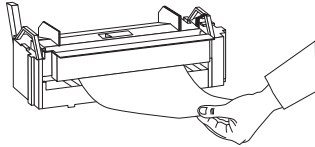
 **When accessing the central area take care not to touch the hot surfaces around the fuser. These are clearly marked with yellow warning labels, and are very hot.**

2. Push the two coloured fuser latch levers (1) away from you (towards the rear of the printer).

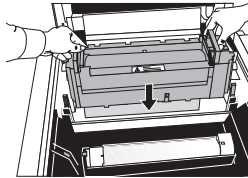


3. Lift the fuser by its two handles (2) straight up and out of the printer.

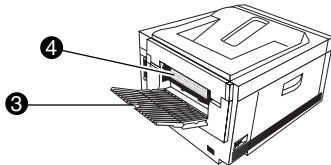
4. Pull out the sheet of paper from between the fuser rollers.



5. Lower the fuser back into the printer, press down firmly to locate, then pull on the two latch levers to ensure the fuser is locked in position.



6. Open the rear exit stacker (3).



7. Look into the rear of the printer and check for any sheets (4) of paper. Remove any that you find.

8. Close the rear exit stacker (unless you intend to use it for the remainder of the print job).
9. Check for and clear any paper feed jams or paper input jams, as described in the preceding sections.
10. Close the top cover and press down firmly to latch it down. The print process will resume automatically when you close the top cover, after a short period to allow the fuser to warm up again.

Replacing Toner Cartridges

Your printer uses four toner cartridges: one each for cyan, magenta, yellow and black. If purchasing less than a complete set, ensure you are purchasing the colour you require. This is clearly indicated on the box.



Always use genuine OKI consumables with your printer. These come in the familiar OKI red and white boxes and are designed and manufactured specially for use in OKI printers.

Genuine OKI toner is made from non-toxic materials and is perfectly safe to use, provided you follow a few basic safety rules.

1. When removing old toner cartridges from your printer you will see the toner powder on top of the image drum cartridges. Take care to avoid performing this task in a draft, and do not blow on the powder, as this may cause a toner cloud. If you inhale such a cloud, seek a clean fresh air environment, and take a few deep breaths. If you continue to experience any discomfort seek medical advice.
2. If you spill any toner on your skin or clothes, brush it off. If necessary, rinse in cold water. Do not use hot water, since the application of heat might make the marks permanent.

3. Do not attempt to clean spilled toner with any solvent or spirit-based solution, as this may partially dissolve the toner and cause permanent marking.
4. Take the new cartridge out of its box before you remove the old one. The new cartridge comes with a plastic bag which can be used to wrap the old cartridge for disposal.
5. Do not smoke while changing the toner cartridge. If you do accidentally cause a toner cloud, as with all fine particle clouds, it could become flammable.

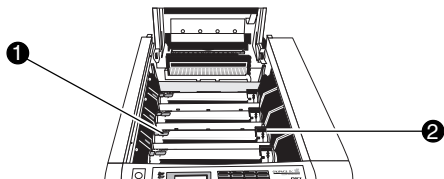
When to Change a Toner Cartridge

The printer will display a message when any toner cartridge is within about 100 pages of the end of its life. The display will also indicate which colour is running out. You can normally expect a toner cartridge to produce about 3000 pages at 5% print density (this is a typical density for text pages).

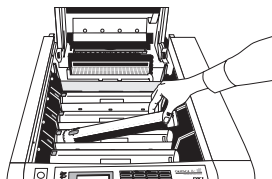
There is no hard and fast rule, since toner life depends very much on image content. Also, when installing a new image drum, the first toner cartridge will run out more quickly, because the drum reservoir must fill when new.

Replacing a Toner Cartridge

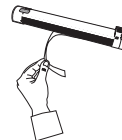
1. Press the OPEN button and raise the top cover to its fully upright position.
2. Identify by the coloured label (1) which toner cartridge you intend to remove.
3. Unlock the cartridge by pulling the coloured lever (2) at the right-hand end towards you.



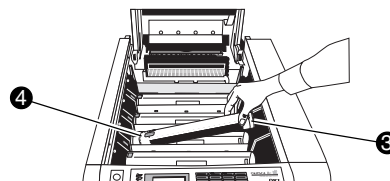
4. Lift the right-hand end of the cartridge away from the image drum, and then lift the cartridge out of the machine. Wrap it for disposal in the plastic bag supplied with the new cartridge.



5. Gently shake the new cartridge from side to side to evenly distribute the toner along its length.
6. Peel off the white adhesive tape seal from the underside of the toner cartridge.

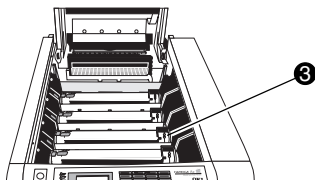


7. Holding the cartridge with the coloured lever (3) to the right and the white end cap (4) to the left, lower the toner cartridge into the top of the image drum cartridge, white cap end first, then press gently down on the other end to locate the cartridge firmly onto the image drum cartridge.



Do not force the toner cartridge into position. It is fitted with a lock-out mechanism to prevent insertion into the wrong image drum cartridge.

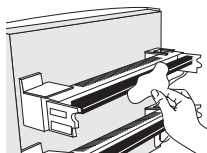
- Push the coloured locking lever (3) away from you (towards the back of the printer) to lock the cartridge home and release the toner supply.



Cleaning the LED Arrays

Before closing the printer cover, the LED arrays should be cleaned, using the paper towel in the sachet supplied with the new toner cartridge. After cleaning, avoid touching these arrays with your fingers.

- Gently wipe clean each of the four LED arrays under the printer top cover.



- Close the top cover and press down firmly at both side to latch it down.

Replacing Image Drums

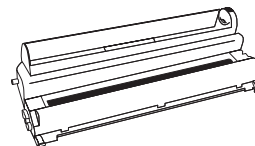
There are four image drums in the printer, one each for cyan, magenta, yellow and black. If purchasing less than a complete set, ensure you are purchasing the colour you require. This is clearly indicated on the box. These are delicate units and should be handled with care.



Always use genuine OKI image drums with your printer. These come in the familiar OKI red and white boxes and are designed and manufactured specially for use in OKI printers.

The green surfaces of the drums are light sensitive and should not be exposed to strong ambient light, and especially not direct sunlight.

The green drum surfaces are easily scratched, and should not be put down where they might come into contact with hard or abrasive materials. If removed from their packaging, or from the printer, for more than a few moments, they should be wrapped in their black, lightproof plastic bags.



It is essential that each drum be installed in its correct position in the printer, corresponding with the appropriate coloured label inside the printer. Each drum assembly is marked with a similar coloured label for ease of identification.

When to Change a Drum Cartridge

The printer will display a message when any drum cartridge needs to be replaced. The status lights on the operator panel will indicate which drum to replace.

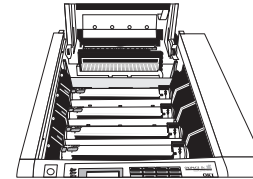
You can normally expect a drum cartridge to produce about 12,000 pages.

Also, when installing a new image drum, a new toner cartridge should also be installed with it. This toner cartridge will run out more quickly than normal, because the drum reservoir must fill when new.

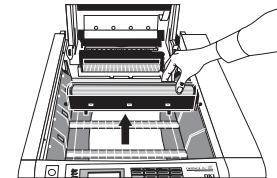
Changing a Drum Cartridge

Since the toner cartridge should also be replaced at the same time, the image drum may be removed with the old toner cartridge still in place.

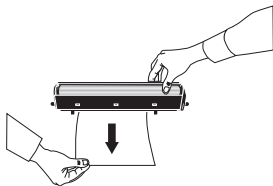
1. Switch off the printer main power.
2. Press the OPEN button and raise the top cover to its fully upright position.
3. Identify by coloured label which drum you intend to replace.



4. Grip the top of the drum assembly and lift it straight up and out of the printer.



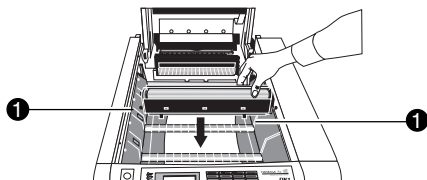
- Unpack the new drum cartridge and pull out the protective sheet of paper.



Pull the sheet straight downwards to avoid tearing.

- Hold the new cartridge above its intended position and lower it gently all the way in.

Locating slots (1) at each side of the printer help you to correctly position the drum cartridge.



- Remove any plastic foam seal from the top of the new drum cartridge.
- Install a new toner cartridge of the appropriate colour, following the instructions given in the previous section.

Resetting Drum Count

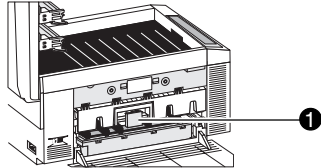
After installing a new image drum the page counter for that drum should be reset. This is performed using the User Menu.

- Hold down the **MENU 1 / Menu 2** key for about 2 seconds until the menu item **COLOR REG ADJUST** appears in the display.
- Press and release the **MENU 1 / Menu 2** key to cycle through the available items. When the display shows **ENGINE CNT RESET**, press **ENTER**.
- Press and release the **MENU 1 / Menu 2** key to cycle through the available items. When the display shows **CCCCC DRMCNT** (“CCCCC” means the colour of the replaced drum), press the **ENTER** key to reset the drum count.
- If you have changed two or more drums at the same time, also reset their counts.
- Press the **ON LINE** key to exit from the User Menu and return to the **ON LINE** (ready) condition.

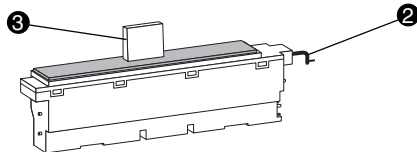
Replacing Waste Toner Box

The waste toner box should be replaced after approximately 25,000 pages. When the waste toner box needs replacing a message to that effect will appear on the operator panel display.

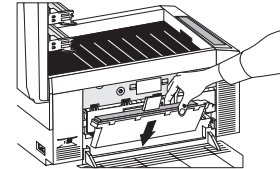
1. Lift the catch and open the left-hand side panel.



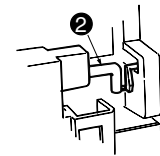
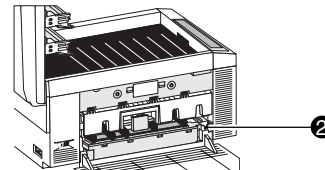
2. Press down against spring pressure on the top of the waste toner box (1), pull it outwards and lift it clear of the printer.
3. Position the new waste toner box with its drive coupling (2) towards the front of the printer and the lifting tab (3) at the top.



4. Locate the bottom of the waste toner box into position near the bottom of the printer, and push down against spring pressure.



5. Push the top of the waste toner box into the printer so that the box is upright, then release the downward pressure, allowing the box to rise.
6. Check that the drive coupling (2) on the waste toner box is correctly located slightly below and in front of the coupling on the printer.

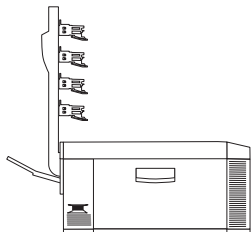


7. Close the left-hand side panel.

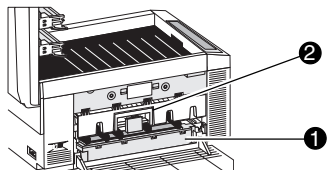
Replacing Transfer Belt

The transfer belt assembly must be replaced after approximately 50,000 pages. When the belt needs replacing you will see a message to this effect on the operator panel display.

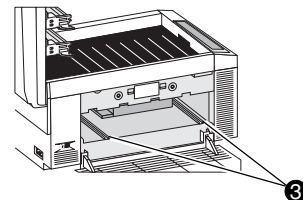
1. Press the OPEN button and lift the top cover to its fully upright position. This allows the drums to rise clear of the belt.



2. Lift the catch and open the left-hand side panel.



3. Remove the waste toner box (1) as described in the preceding section.
4. Lift the coloured handle (2) on the belt assembly and withdraw the unit from the printer.
5. Locate the new belt unit into its guide rails (3) in the printer and gently push it all the way in until it locks into position.



6. Refit the waste toner box as described in the preceding section.
7. Close the left-hand side panel.
8. Close the top cover and press down firmly at both sides to ensure that it locks down.

Resetting Belt Count

After installing a new transfer belt the page counter for the belt unit should be reset. This is performed using the User Menu.

1. Hold down the **MENU 1 / Menu 2** key for about 2 seconds until the menu item **COLOR REG ADJUST** appears in the display.
2. Press and release the **MENU 1 / Menu 2** key to cycle through the available items. When the display shows **ENGINE CNT RESET**, press **ENTER**.
3. Press and release the **MENU 1 / Menu 2** key to cycle through the available items. When the display shows **BELT COUNT** press the **ENTER** key to reset the belt count.
4. Press the **ON LINE** key to exit from the User Menu and return to the **ON LINE** (ready) condition.

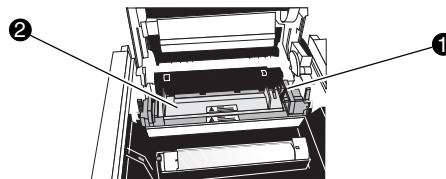
Replacing Fuser Oil Roller

This unit should be replaced after approximately 10,000 pages. Its purpose is to lubricate and clean the fuser roller, and if left unchanged will result in poor print quality due to image offsetting from the fuser.

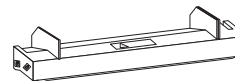


Be careful not to touch any of the very hot surfaces around the fuser unit. These are clearly indicated by bright yellow warning labels.

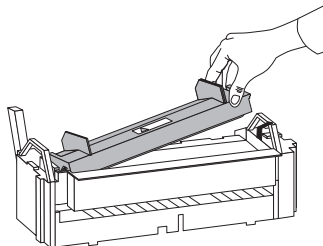
1. Press the **OPEN** button and raise the top cover to its fully upright position.
2. Push the small coloured locking lever (1) away from you (towards the rear of the printer).



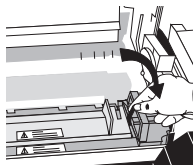
3. Lift the oil roller unit (2) by its right-hand end, pull it slightly to the right to disengage the left-hand end from the fuser unit, and lift the oil roller unit out of the printer.
4. Hold the new oil roller unit with the yellow warning label on top and facing you.



5. Lower the left-hand end of the unit into the printer and locate under the retaining lip on top of the fuser unit.



6. Lower the right-hand end of the oil roller unit down onto the fuser.
7. Pull the small coloured locking lever to the right of the oil roller unit towards you (towards the front of the printer) to lock the oil roller into position.



The coloured labels on the oil roller and the fuser should now be aligned one above the other.

8. Close the top cover and press down firmly at both sides to ensure that it locks down.

Resetting Fuser Oil Roller Count

After installing a new fuser oil roller, the page counter for the roller unit should be reset. This is performed using the User Menus.

1. Hold down the **MENU 1 / Menu 2** key for about 2 seconds until the menu item **COLOR REG ADJUST** appears in the display.
2. Press and release the **MENU 1 / Menu 2** key to cycle through the available items. When the display shows **OIL ROLLER COUNTER** press the **ENTER** key to reset the roller count.
3. Press the **ON LINE** key to exit from the User Menu and return to the **ON LINE** (ready) condition.

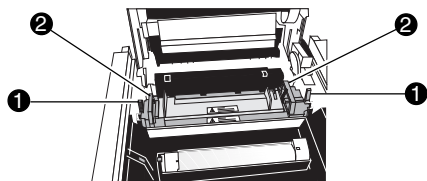
Replacing Fuser Unit

The fuser unit should be replaced after approximately 60,000 pages. When this unit needs replacing a message to that effect will appear on the operator panel display.



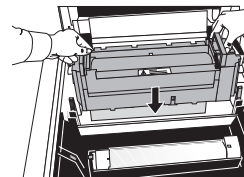
Take care not to touch any of the very hot surfaces around the fuser area. These are clearly indicated by bright yellow warning labels.

1. Press the OPEN button and raise the top cover to its fully upright position.
2. Push the two fuser latch levers (1) away from you (towards the rear of the printer) to release the fuser unit.

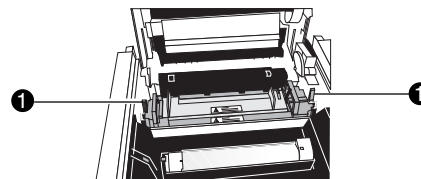


3. Hold the fuser by its two handles (2) and lift the unit straight up and out of the printer.
4. Fit a new fuser oil roller to the top of the new fuser, following the instructions in the preceding section.

5. Hold the new fuser by its two handles, with the yellow warning labels on top and facing you, and lower the unit into the printer, pressing firmly down to fully locate the unit.



6. Pull the two latching levers (1) towards you to ensure that the fuser is locked into position. (It should not be possible to lift the fuser when it is properly locked in position.)



7. Close the top cover and press down firmly at both sides to ensure that it locks down.

Resetting Fuser Count

After installing a new fuser the page counter for the fuser unit should be reset. This is performed using the User Menus.

1. Hold down the **MENU 1 / Menu 2** key for about 2 seconds until the menu item COLOR REG ADJUST appears in the display.
2. Press and release the **MENU 1 / Menu 2** key to cycle through the available items. When the display shows ENGINE CNT RESET, press **ENTER**.
3. Press and release the **MENU 1 / Menu 2** key to cycle through the available items. When the display shows FUSER COUNT press the **ENTER** key to reset the fuser count.
4. Press the **ON LINE** key to exit from the User Menu and return to the ON LINE (ready) condition.

Windows Printer Driver

The Windows printer driver supplied with your printer provides on-screen control of most of the printer's main functions, and is presented in the form of a tabbed dialogue box.

Each of the dialogues contains a Help button. Clicking on this will display detailed information to help you choose which settings are best for your particular print job.

The Colour Guide in the CD on-line documentation also offers guidance on colour adjustment provided by the Windows driver.

Clicking on the Default button in any dialogue restores all settings to their default values. These will be the most appropriate for general use.

Status Messages and Problem Solving

| Message | Reason and possible action required |
|---------------------------------|---|
| ON LINE | Printer is ready. |
| BUSY | Job is being processed. |
| DATA PRESENT | Data received has yet to be printed. |
| COMPLEX PAGE IMAGE APPROXIMATED | The current page is too complex and is being simplified. This may result in degraded image quality. Try selecting 300dpi resolution. If this happens frequently you may wish to consider purchasing a memory upgrade. |
| TONER LOW | One or more toner cartridges is nearly empty. The status lights will indicate which colour(s). |
| CHANGE DRUM | One of the image drums requires changing (“CCCCC” indicates colour).The status lights will also indicate which colour(s). |
| FUSER LIFE | The fuser has reached its end of life and requires changing. |
| BELT LIFE | The transfer belt unit has reached its end of life and requires changing. |
| WAITING FOR MANUAL FEED | The printer is requesting paper via its front manual feed slot. |
| PAPER EMPTY | The paper has run out. |
| TRAY <i>n</i> NOT INSTALLED | The indicated paper tray is not installed properly. |
| CANNOT USE A6 PAPER ON 2ND TRAY | The second paper tray cannot feed A6 size paper. Use Tray 1 or the manual feed slot. |
| 1ST TRAY INSTALL REQUEST | The printer is trying to automatically switch to the second paper tray when Tray 1 paper ran out. You must leave Tray 1 in place. |
| PAPER CHANGE REQUEST | The printer is requesting a different size paper in the indicated tray. |
| MEMORY OVERFLOW | The current page is too complex and cannot be printed. Try selecting 300dpi resolution. If this happens frequently you may wish to consider purchasing a memory upgrade. |
| COMPLEX PAGE IMAGING INCOMPLETE | This is known as a <i>print overrun</i> and occurs because the page is too complex to be printed. Try selecting 300dpi resolution. If it occurs frequently you may wish to consider purchasing a memory upgrade. |

Status Messages and Problem Solving *(continued)*

| Message | Reason and possible action required |
|-------------------------------|--|
| TONER EMPTY | The indicated colour of toner has run out. Install a new toner cartridge. |
| WASTE TONER FULL | The waste toner box is full. Install a new one. |
| OIL ROLLER LIFE | The fuser oil roller has reached its end of life. Install a new one. |
| PAPER SIZE ERROR | The paper size detected by the printer is incorrect for the current print job. |
| HOPPING ERROR | Paper being fed from the paper tray has jammed. Clear as for a paper input jam. |
| PAPER INPUT JAM | A paper jam has occurred between the paper tray and the first image drum. Follow the instructions in this manual to clear it. |
| PAPER FEED JAM | A paper jam has occurred between the first image drum and the fuser. Follow the instructions in this manual to clear it. |
| PAPER EXIT JAM | A paper jam has occurred either in the fuser or between the fuser and the point of exit. Follow the instructions in this manual to clear it. |
| BELT NOT INSTALLED | The transfer belt unit is not installed correctly. Open the top and left-hand side covers, check and reinstall as necessary. |
| WASTE TONER BOX NOT INSTALLED | The waste toner box is not installed correctly. Open the left-hand side cover, check and reinstall as necessary. |
| COVER OPEN | The top cover is open. Close it and press down firmly at both sides to latch it closed. |
| ERROR POSTSCRIPT | Indicates there is an error with the postscript file being sent to the printer. The printer automatically prints out an error page giving details of the postscript error. |
| OTHER ERROR MESSAGES | For other error messages call for technical service. |

Specifications

| CATEGORY | ITEM | SPECIFICATION |
|------------------|-------------------|--|
| Physical | Width | 478mm |
| | Depth | 622mm |
| | Height | 397mm |
| | Weight | Less than 52kg |
| Print speed | Engine speed (A4) | 8PPM – normal paper |
| | | 5PPM – transparencies / label / ultra heavy / card stock |
| Print start | First print time | 25 seconds |
| | Warm-up time | 160 seconds at 25°C |
| Resolution | LED head | 600 x 600dpi |
| | Maximum Input dpi | 600 x 600dpi |
| | Output dpi | 600 x 600dpi |
| CPU | Core | MIPS R5000 |
| | I-Cache, D-Cache | 32KB, 32KB |
| | Clock | 200MHz |
| | Bus width | 64bit |
| RAM | Resident | 32MB |
| | Option | 16/32/64MB SIMM sets |
| ROM | Program | 8MB Program (PS) + 8MB Program (PCL) + 2MB Flash ROM |
| Electrical Power | Voltage | 230VAC -14% ~ 240V +10% |
| | Frequency | 50 or 60Hz +/-2% |
| | Power save mode | 40W |
| | Idle | 70W |
| | Typical operation | 280W |
| | Peak | 980W |

| CATEGORY | ITEM | SPECIFICATION |
|-------------------------------|---|--|
| Electrical power (continued) | Peak AC power cable | 4A Standard 1.8m IEC cable fitted with UK or European 3-pin power plug |
| Temperature | Operating Non-operating Storage Transit | 10 – 32°C (Full colour 17 – 27°C) 0 ~ 43°C -10 ~ 43°C for less than 1year -29 ~ 50°C less than 1 month |
| Humidity | Operating Non-operating Storage Transit | 20 ~ 80% at 25°C (50 ~ 70% for full colour) 10 ~ 90% at 26.8°C 10 ~ 90% at 35°C 10 ~ 90% at 40°C |
| Location Environment | Incline Altitude Impact | Maximum 1 degree 2500m above sea level 305mm max drop height while the printer is in its box |
| Vibration | Operation Transport | 5~10Hz 0.1mm; 10~14Hz 0.02G; 14~54Hz 0.05mm; 54~200Hz 0.3G 5~10Hz 10.16mm; 10~14Hz 2G; 14~54Hz 0.38mm; 54~200Hz 5G |
| Approvals | | EN60950, CE:EN55022 class B/EN50082-1 |
| Life & duty cycle | Printer life | 300,000 pages, 5 years; max. 25,000 pages/month, av. 5000 pages/month |
| Service & Reliability | MTBF MTTR | 5,700 print hours @ 2.3% duty 20 minutes |
| Consumables life (Approx.) | Toner life Oil roller Waste toner box Image drum Transfer belt Fuser | 3000 pages at 5% density <i>(2000 pages for first toner cartridge with new drum)</i> 10,000 pages 25,000 pages at 5% density 12,000 pages (cont. printing); 7,500 (3 pages/job); 5,000 (1 page/job) 50,000 pages 60,000 pages |

| CATEGORY | ITEM | SPECIFICATION |
|---------------------------|---|---|
| Acoustic noise | Operating Standby Power save mode | 54dBA 45dBA 43dBA |
| Paper handling | Input (1st / 2nd tray) Input (Manual / Auto) Paper size detection Output | Legal / Univ. cassette, 500 sheets (up to 50mm) 100 sheets or 40 transparencies Automatic for 1st and 2nd trays 250 sheets, face down (top); 100 sheets, face up (rear) |
| Paper size | 1st tray 2nd tray Auto front feeder | Legal / Universal cassette: Legal, Letter, Executive, A4, A5, B5, A6, Free Legal / Universal cassette: Legal, Letter, Executive, A4, A5, B5, Free Legal, Letter, Executive, A4,A5,B5,A6, Free |
| Minimum paper size | 1st tray 2nd tray Auto front feeder | Length x Width: 148 x 105 mm (A6) Length x Width: 210 x 148 mm (A5) Length x Width: 140 x 86.4mm |
| Special paper | Auto feed | Transparency, Label stock |
| Paper weight | 1st / 2nd tray Manual feed | 64~105g/m ² 64~200g/m ² |
| Operator panel | LCD LED (Colour) Membrane keys | 16ch, 2line, Paper size indicator 6 (Amber x 5, Red x 1) 8 |
| Status switches / sensors | Paper end Toner low Cover open Fuser temperature Paper size | Yes Separate for Y, M, C & K) Yes Yes Yes |

| CATEGORY | ITEM | SPECIFICATION |
|-------------------------|---|--|
| Communication interface | Standard Options I/O switch | IBM-Centro CEN36, IEEE1284Nibble Ethernet 100Base-TX / 10Base-T Auto |
| Emulation | Standard Emulation switch | PCL5c/PostScript 3 Auto (PCL / PS) |
| Software | Windows drivers Status monitor | Windows 3.1x, 95, NT4 Yes (Windows) |
| Fonts | PCL Bitmap PCL Scalable PS Scalable | 4 (Line Printer, OCR-A, OCR-B, USPS Barcode) 45 136 |
| Upgrade options | RAM set Interface Paper Cassette | 8MB x 2, 16MB x 2, 32MB x 2 SIMM Ethernet 100Base-TX / 10Base-T 2nd paper tray, Legal / Univ. (500 sheets) |
| Other | Grey Scale Colour | 256 level half-toning 24 bit colour |

OKI reserves the right to alter specifications without notice.

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